Scope of Services
Engineering Design/Build Project

Lake and River Enhancement Program (LARE)
IDNR Division of Fish and Wildlife

I. PROJECT PURPOSES:

The purposes of the Lake and River Enhancement Design/Build project include:

1. Prepare a complete physical design(s) that is ready to move to the construction phase

2. Ensure project success through necessary communication with permitting agency staff and affected landowner.

3. Complete project construction as designed.

II. PROJECT TASKS:

1. Identify boundaries of the project site(s)
Determine exact site locations for proposed structures and other design elements. Generate appropriate maps and drawings for discussion purposes.

2. Complete engineering/calculations
Complete all necessary engineering computations to generate a workable design including surveying and mapping, soil borings and geotechnical analyses, hydrologic and hydraulic analyses and all associated calculations (if not previously completed in the feasibility phase).

3. Complete early coordination process for obtaining all project permits including USACE, IDEM, USFWS, IDNR, County Drainage Boards, and pertinent citizen organizations. Coordinate review of the preliminary design plan with all pertinent agencies and institutions in order to facilitate issuance of all necessary permits (if permits not previously secured in the feasibility phase). This includes meeting with affected landowners to discuss specific design elements and expected results.

4. Project progress reporting
Issue monthly progress reports during the duration of the project. Copies of progress reports are to be, at a minimum, submitted to the project sponsor and LARE program staff.

5. Complete design drawings
Develop plan sheet drawings of all proposed sites and structures (including plan view and/or cross sectional details).

6. Determine construction cost estimates and timelines
Develop cost estimates for the construction phase of the project. Plan and utilize appropriate seasonal timing for construction phase.

7. Confirm easements and land availability
Determine all necessary project property easements including those for construction ingress, egress and flooding. The task also includes obtaining land rights sufficient for the purpose of construction and inspection (if not previously completed in the feasibility phase).

8. Complete a flood stage analysis if determined necessary Complete a hydraulic computer model illustrating flood profiles sufficient for the purpose of securing necessary project permits (if not previously completed in the feasibility phase).

9. Conduct a wetland impact assessment of any affected areas Conduct a preliminary survey to identify and give approximate distribution maps for wetland vegetation existing at locations that may be affected by the project. Prepare distribution maps of plantings included in project design. An appropriate field method for wetland functional assessment will be used to estimate the level of ecological benefit and impact predicted from the project.

10. Build the project to the specifications set forth in the design and in accordance with permit conditions.

11. Insure successful installation of materials via project management oversight.

12. Correct any immediate structural or material failures.

13. Complete engineering 'as-built' design report which includes completion of a bound engineering design and construction report illustrating no less than the following:

A. Executive Summary.

B. A statement of project purpose.

C. A general overall project description (including project contractor, project timing, project accomplishments, specs on project materials, any changes from original scope, and any necessary future project inspection and maintenance).

D. A heading and summary for each project task with accompanying appendices if necessary. The appendices should include (if applicable) but are not limited to:

1) All pertinent data, including field sheets.

2) Engineering calculations.

3) Computer model input and output.

4) Geotechnical investigation information.

5) All pertinent and appropriate project correspondence.

6) Necessary maps, charts, graphs, computations and computational breakdowns.

7) Pertinent meeting agendas, attendance lists and agreements.

E. Final plan sheets and 'as-built' designs.

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III. DATA PRESENTATION:

1. Raw data sheets need not be bound into each copy of the report. However, at a minimum, one set of all design and field data must be submitted to the LARE program office to aid in the review of the draft report and plan sheets.

2. Presentation of data in English units with metric units in parenthesis is preferred (i.e., 5ft (1.5m)).

IV. REVIEW PROCESS:

1. Four (4) **hard copies** and one electronic copy (in either MS-Word or Adobe PDF format) of the draft report and plan sheets must be provided to the LARE program office for review by the local sponsor, LARE staff, county SWCD and Drainage Board. Where the project area covers more than one county, two (2) additional copies of the report and plan sheets should be supplied for each additional county.

2. The LARE staff will forward two (2) copies of the draft report and plan sheets to the local sponsor for review.

3. Both draft and final report must be reproduced with two-sided pages for hard copies and presented as a single electronic file in MS-Word or Adobe PDF format, suitable for posting to the LARE website.

4. The titles of the draft report and plan sheets must refer to the report as a "draft" version. Additionally, each page of the draft report and plan sheets must be labeled "Draft - Subject to Revision."

5. To facilitate review of the draft report and plan sheets, a meeting between a representative of the local sponsor, consultant, and LARE staff will be held to discuss the review comments. This meeting will be coordinated by LARE staff.

6. Upon addressing the review comments, four (4) copies of the final report and plan sheets must be provided to the LARE office. A digital version in either MS-Word or Adobe PDF format must also be submitted. Where the project area covers more than one county, two (2) additional copies of the report and plan sheets should be supplied for each additional county involved.

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